

**REMARKS**

Claims 1-19 have been examined. Claims 6-8, 14 and 17 have been rejected under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph, claims 1, 2, 9-11, 15, 18-19 have been rejected under 35 U.S.C. § 102(e), and claims 3-6, 12-14 and 16-17 have been rejected under 35 U.S.C. § 103(a).

Applicants are amending claims 1, 6, 14, 15 and 17. These amendments do not narrow the scope of the original claims.

**I. Rejection under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph**

Claims 6-8, 14 and 17 have been rejected under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Applicants have amended claims 6, 14 and 17, to address the Examiner's remarks with respect to these claims. Accordingly, Applicants respectfully request that the rejection of claims 6-8, 14 and 17 under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph, be withdrawn.

**II. Rejection under 35 U.S.C. § 102(e) over U.S.P. 6,155,664 to Cook**

Claims 1, 2, 9-11, 15, 18-19 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Cook. Applicants respectfully traverse this rejection.

Cook fails to anticipate the ink jet recording apparatus of claim 1 that allows a user to execute a subsequent printing operation even when compatibility of an ink cartridge cannot be confirmed when the ink cartridge is mounted.

As illustrated in Figure 3 and column 8, lines 46-50, column 9, lines 31-36, and column 10, lines 2-6 and 46-52 of Cook, when incompatibility is determined, printing is stopped and the user is prompted for assistance. However, the ink jet recording apparatus of Cook that allegedly anticipates the ink jet recording apparatus of claim 1, does not permit a subsequent printing operation to be executed (see step 75).

For at least these reasons, Cook fails to anticipate claim 1 and dependent claim 2.

Since method claim 15 also recites executing a subsequent printing operation even when compatibility of an ink cartridge can not be confirmed, then Cook fails to anticipate the method of claim 15.

With respect to claim 9, Cook fails to anticipate an ink jet recording apparatus that outputs data used as a guide for determining a compatible ink cartridge if the compatibility can not be confirmed.

The Examiner alleges that since Cook allegedly warns a user that the cartridge is not compatible, this warning is enough to enable the user to determine a compatible ink cartridge through, e.g. trial and error. However, the Examiner's assertion is incorrect, irrelevant and does not establish anticipation of claim 9. The ink jet recording apparatus of Cook that allegedly anticipates the ink jet recording apparatus of claim 9 fails to output data used as a guide for determining a compatible ink cartridge, if the compatibility can not be confirmed. Rather, as acknowledged by the Examiner, Cook merely notifies the user that the cartridge is not compatible. Cook fails to output the claimed data used as a guide by the user for determining a compatible ink cartridge.

For at least these reasons, Cook fails to anticipate the ink jet recording apparatus of claim 9.

The ink jet recording apparatus of claim 11 and method claims 18 and 19 recite features to those described above with respect to claim 9. Accordingly, Cook fails to anticipate claims 11, 18 and 19.

In view of the above, Applicants respectfully request that the rejection of claims 1, 2, 9-11, 15 and 18-19 under 35 U.S.C. § 102(e), be withdrawn.

### **III. Rejection under 35 U.S.C. § 103(a) over Cook**

Claim 3 has been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Cook. Applicants respectfully traverse this rejection.

Cook fails to teach or suggest the ink jet recording apparatus of claim 1 for at least the reasons stated above. Indeed, Cook fails to recognize one of the problems addressed by Applicants' claimed invention in that the user can print even when an incompatible ink cartridge is mounted.

Additionally, Applicants note that a proper obvious rejection must consider the claimed invention as a whole. Therefore, even assuming *arguendo*, that it is known in the art to move an ink cartridge to a replacement position if a cartridge replacement instruction is entered as recited in claim 3, the prior art as a whole fails to suggest the ink jet recording apparatus of claim 3.

For at least these reasons, the Examiner has failed to establish a *prima facie* case of obviousness. Accordingly, Applicants respectfully request that the rejection of claim 3 under 35 U.S.C. § 103(a), be withdrawn.

**IV. Rejection under 35 U.S.C. § 103(a) over Cook in view of U.S.P. 5,455,606 to Keeling et al. (“Keeling”) and further in view of U.S.P. 5,699,091 to Bullock**

Claims 4-6 and 16-17 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Cook in view of Keeling and Bullock. Applicants respectfully traverse this rejection.

With respect to claim 4, Cook, Keeling and Bullock, individually or in combination, fail to teach or suggest executing a print operation based on data in a default data storage means when the ink cartridge is incompatible. The Examiner alleges that Keeling teaches if information is not available regarding a recording unit, default values are used which approximate the expected values, citing column 11, lines 60-66 of Keeling, which allegedly corresponds to the above-mentioned limitation. However, the Examiner’s assertion is incorrect for the following reasons.

Keeling does not address the situation of executing a print operation when the ink cartridge is incompatible. (Col. 28, line 55 through column 29, line 34). Rather, column 11, lines 60-66, relates to a situation where allegedly default values are used when calibration codes specific to the new print head have not been entered using the keyboard 29. These calibration codes are used to optimize the printing conditions for the new print head. *Id.* However, it is clear from the disclosure of Keeling and the cited passage, that this situation relates to an instance when the new print head is known to be compatible, however, has not yet been optimized. In contrast, the ink jet recording apparatus of claim 4 executes a print operation based on default data even if the ink cartridge is incompatible.

Additionally, as stated above with respect to claim 1, Cook does not teach or suggest an ink jet apparatus that executes a print operation using an incompatible ink cartridge. Rather, the ink jet apparatus of Cook does not execute a printing operation when an incompatible ink cartridge has been determined. Therefore, one skilled in the art would have deterred in modifying Cook in the manner suggested by the Examiner because Cook teaches away from this approach. Put another way, the ink jet recording apparatuses of both Cook and Keeling allegedly perform a print operation when it has been determined or it is known that the ink cartridge is compatible. These features are unlike that of the ink jet recording apparatus of claim 4. Bullock fails to compensate for these deficiencies.

For at least these reasons, the ink jet recording apparatuses of claim 4 and dependent claim 5 are not rendered obvious by Cook, Keeling and Bullock.

Since method claim 16 recites executing print operation based on data stored in default data storage means if the ink cartridge is incompatible, then for reasons analogous to those presented above with respect to claim 4, Cook, Keeling and Bullock fail to render obvious the method of claim 16.

With respect to claim 6, the grounds of rejection fail to address this claim. For at least these reasons, the Examiner has failed to establish a *prima facie* case of obviousness. Additionally, Applicants note the following.

The ink jet recording apparatus of claim 6 includes setup range storage means storing normal setup range data and a determination section that, *inter alia*, compares ink information read from the storage element with the normal setup range data and executes printing using the

general purpose drive condition if the ink information is out of the normal setup range. Cook, Keeling and Bullock, individually or in combination, fail to teach or suggest the above-mentioned limitations. Therefore, Cook, Keeling and Bullock fail to render obvious the ink jet recording apparatus of claim 6. Claims 7 and 8 are patentable at least by virtue of their dependency on claim 6.

Since method claim 17 recites features similar to those of claim 6, then for reasons analogous to those presented above with respect to claim 6, Cook, Keeling and Bullock fail to render obvious the method of claim 17.

For at least these reasons, the Examiner has failed to establish a *prima facie* case of obviousness. Accordingly, Applicants respectfully request that the rejection of claims 4-6 and 16-17 under 35 U.S.C. § 103(a), be withdrawn.

**V. Rejection under 35 U.S.C. § 103(a) over Cook, and U.S.P. 5,764,251 to Hashimoto and U.S.P. 6,102,508 to Cowger.**

Claims 12 –13 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Cook as applied to claim 11 above, and further in view of Hashimoto and Cowger. Applicants respectfully traverse this rejection.

With respect to claim 12, Applicants note that Hashimoto fails to compensate for the deficiencies of Cook with respect to claim 11. Therefore, Cook and Hashimoto fail to render obvious the ink jet recording apparatus of claim 12.

With respect to claim 13, Applicants note that Cowger fails to compensate for the deficiencies of Cook with respect to claim 11 for the following reasons.

The condition of Cowger upon which data used as a guide is outputted, is unlike that of the present invention. Cowger apparently discloses printing of an image 14 of the replaceable consumable to allegedly assist the user in selecting a proper consumable for the printing device, when e.g., the proper consumable 22 is not installed in the printer 10 (column 5, lines 3-4).

In contrast, the ink jet apparatus of claim 11 that includes the control means, outputs data used as a guide for determining a compatible ink cartridge when compatibility of the ink cartridge can not be confirmed. Cook is also silent as to this condition.

For at least these reasons, the Examiner has failed to establish a *prima facie* case of obviousness because the prior art fails to teach or suggest all the limitations of claim 11.

Additionally, one skilled in the art would not have been motivated to incorporate the teachings of Cowger into the invention of Cook.

“There must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination.” MPEP §2143 (8<sup>th</sup> Edition); In re Oetiker, 977 F.2d 1443, 24 U.S.P.Q.2d 1443 (Fed. Cir. 1992). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. MPEP §2143.01 (8<sup>th</sup> Edition); In re Mills, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990).

Both Cook and Cowger allegedly address the problem of selecting a proper ink cartridge, however, their respective approaches are distinct. Therefore, one skilled in the art would not have been led to incorporate the teachings of Cowger with Cook because Cook is complete in this respect. Put another way, the approach taught in Cowger would completely supplant the approach by Cook if Cowger was incorporated with Cook. Indeed, one skilled in the art would

have recognized that Cook or Cowger adequately solve the problem of selecting a proper ink cartridge.

Further, there is nothing to suggest that the approach of Cowger is an improvement over the approach Cook. Even assuming *arguendo*, that the approach of Cowger offers some advantage over Cook, a skilled artisan would not deem it necessary to utilize both approaches. In sum, there is nothing in the prior art that would have led a skilled artisan to incorporate the teachings of Cowger into Cook.

For at least the reasons presented above, the Examiner has failed to establish a *prima facie* case of obviousness for claims 12 and 13. Applicants respectfully request that the rejection of claim 12 and 13 under 35 U.S.C. § 103(a), be withdrawn.

**VI. Rejection under 35 U.S.C. § 103(a) over Cook and further in view of Cowger**

Claim 14 has been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Cook as applied to claim 11 above, and further in view of Cowger. Applicants respectfully traverse this rejection.

Applicants note that Cowger fails to compensate for the deficiencies of Cook with respect to claim 11. Applicants incorporate the arguments presented above with respect to claim 11. Applicants respectfully request that the rejection of claim 14 under 35 U.S.C. § 103(a), be withdrawn.

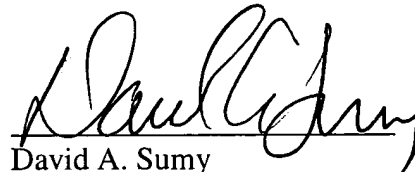


**VII. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

  
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**APPENDIX**  
**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE CLAIMS:**

**The claims are amended as follows:**

1. (Amended) An ink jet recording apparatus comprising an ink jet recording head for receiving supply of ink from an ink cartridge provided with storage means storing data for determining compatibility of a recording apparatus, and control means for determining compatibility of ink based on the data in the storage means and executing print operation, wherein

if compatibility to an ink cartridge cannot be confirmed when the ink cartridge is mounted, the recording apparatus generate a caution and awaits input of a continuation instruction by a user to execute a subsequent print operation with the ink cartridge.

6. (Amended) An ink jet recording apparatus comprising an ink jet recording head for receiving supply of ink from an ink cartridge provided with storage means storing data for determining compatibility to a recording apparatus, and control means for determining compatibility of ink based on the data in the storage means and executing print operation, comprising:

optimum drive condition storage means storing an optimum drive condition for an ink cartridge, compatibility of which can be confirmed;

setup range storage means storing normal setup range data for comparison;  
~~concerning~~ with ink information in the storage ~~element~~ means of an ink cartridge;

general-purpose drive condition storage means storing a general-purpose drive condition for making it possible to reliably print even with an ink cartridge, compatibility of which cannot be confirmed; and

a determination section which compares ~~attention~~ ink information read from the storage element means of an ink cartridge with the normal setup range data, ~~which~~ and executes printing using the optimum drive condition if the ink information is within the normal setup range, and ~~which~~ executes printing using the general-purpose drive condition if the ink information ~~contains~~ is out of the normal setup range.

14. (Amended) The ink jet recording apparatus as claimed in claim 11, wherein the control means determines the compatibility of the mounted ink cartridge based on the data from the storage means when the mounted ink cartridge is to be replaced, and the control means outputs data for specifying that the mounted ink cartridge ~~if it is the compatible is found~~.

15. (Amended) A method of determining compatibility of ink based on data stored in storage means of an ink cartridge for supplying ink to a recording head of an ink jet recording apparatus, the method comprising ~~the steps of:~~

generating a caution if compatibility to an ink cartridge cannot be confirmed when the ink cartridge is mounted; and

awaiting input of a continuation instruction by a user to execute a subsequent printing operation.

17. (Amended) A method of controlling an ink jet recording apparatus comprising an ink jet recording head for receiving supply of ink from an ink cartridge provided with storage means storing data for determining compatibility to a recording apparatus, the method comprising the steps of:

comparing ~~attention~~ ink information read from the storage means with normal setup range data;

executing print operation using optimum drive condition if the ink information is within the normal setup range; and

executing print operation using general-purpose drive condition if the ink information contains information out of the normal setup range.